

determined interval following detection of a touch input, as described above with reference to touch operable commands.

[0041] In some embodiments, pentouch operable commands may include a move command executable via manipulation of a pen-type implement to cause movement of the item to a desired location on the touch sensitive display. As an example, FIG. 6 shows coarse dragging of an object via a handtouch and FIG. 7 shows precise dragging of an object via a pentouch, as described in more detail below.

[0042] FIG. 6 shows a schematic depiction of an embodiment of an interactive display device **80** displaying image **82** on touch sensitive display **84**. As shown, a user's finger **86** is performing a coarse gesture to virtually "toss" image **82**. Thus, the touch sensitive display **84** displays the image being adjusted from an original location indicated by dashed-line to a final location indicated by solid-line.

[0043] FIG. 7 shows a schematic depiction of an embodiment of an interactive display device **90** displaying a precise dragging of an object via a pentouch. As shown, a pen **92** is performing a precise dragging of image **94**. Thus, the touch sensitive display **96** displays the image being adjusted from an original location indicated by dashed-line to a final precise location indicated by solid-line. As shown, the user is precisely positioning image **94** adjacent to another object **98** displayed on touch sensitive display **96**.

[0044] In some embodiments, pentouch operable commands may include a copy and place command executable via manipulation of a pen-type implement to cause a copy of the item to be placed at a desired location on the touch sensitive display. FIGS. 8-10 illustrate an example of such a "copy and place" command. FIG. 8 shows a schematic depiction of an embodiment of an interactive display device **100** displaying on a touch sensitive display **102** a user selecting an object **104** via a handtouch of a user's finger **106**. Upon doing so, the user duplicates object **104** via a pentouch **108**, as shown in FIG. 9, and begins precisely dragging the duplicated object. Upon duplicating the object, the user precisely drags the duplicated object via a pentouch and precisely places the duplicated object adjacent to a line being displayed on touch sensitive display device **102**, as shown in FIG. 10. Likewise, a "copy and toss" command allows a similar transaction to end by tossing the copied item onto a second screen so that the physical screen bezel does not prevent copying objects to a separate screen or off-screen location.

[0045] In some embodiments, pentouch operable commands may include a resize command executable via manipulation of a pen-type implement to cause the item to undergo a desired amount of resizing. Such a command may include the touch sensitive display displaying "handles" on the selected image which the pen may use to precisely adjust the size of the selected image.

[0046] Further, in some embodiments pentouch operable commands may include a rotate command executable via manipulation of a pen-type implement to cause the item to undergo a desired amount of rotation. Again, by utilizing the pen, such rotation may be more precise and controlled than rotation via a handtouch. By employing two touches instead of the pen, coarse resizing and rotation of selected objects can be achieved without the need to target small selection handles with the pen.

[0047] In some embodiments, a combination of a handtouch and pentouch may be utilized to manipulate and/or organize collections of items displayed on a touch sensitive display, an example of which is illustrated in FIGS. 11-13, and described in more detail as follows. FIG. 11 shows an embodiment of an interactive display device **120** displaying a collection **122** of items on a touch sensitive display **124**. A

handtouch of the user **126** selects the collection, upon which the touch sensitive display **124** displays an expansion of the items **128** within the collection **122** as shown in FIG. 12, which user **126** may further manipulate with a bimanual touch such as by pinching. Upon doing so, a pentouch of pen **130** may be used to select an item **132** from the collection, as shown in FIG. 13. The selected item **132** may then be further manipulated via pentouch in any number of ways as described herein. In this manner, a collection can be manipulated as a unit, or elements within the collection can be manipulated individually without resorting to explicit "group" and "ungroup" commands, for example.

[0048] As should be understood from the foregoing, various advantages and benefits may be obtained using the bi-modal (e.g., handtouch and pentouch) and bi-manual (two-handed) interface approaches discussed herein. These approaches may be employed in a variety of settings. As a further example, in a dual-screen embodiment, one screen may be reserved for one type of input (e.g., handtouch) while the other is reserved for another input type (e.g., pentouch). Such a division of labor between the screens may facilitate interpretation of inputs, improve ergonomics and ease of use of the interface, and/or improve rejection of undesired inputs such as incidental handrest or touches to the screen. Another exemplary benefit in the dual-screen environment would be to reduce digitizer power on one of the screens (and thereby lengthen battery charge of the device) upon detection that both of the user's hands are being used to apply inputs to the other screen.

[0049] Referring again to FIG. 1, logic subsystem **22** may include one or more physical devices configured to execute one or more instructions. For example, the logic subsystem may be configured to execute one or more instructions that are part of one or more programs, routines, objects, components, data structures, or other logical constructs. Such instructions may be implemented to perform a task, implement a data type, transform the state of one or more devices, or otherwise arrive at a desired result. The logic subsystem may include one or more processors that are configured to execute software instructions. Additionally or alternatively, the logic subsystem may include one or more hardware or firmware logic machines configured to execute hardware or firmware instructions. The logic subsystem may optionally include individual components that are distributed throughout two or more devices, which may be remotely located in some embodiments.

[0050] Memory/data-holding subsystem **24** may include one or more physical devices configured to hold data and/or instructions executable by the logic subsystem to implement the herein described methods and processes. When such methods and processes are implemented, the state of memory/data-holding subsystem **24** may be transformed (e.g., to hold different data). Memory/data-holding subsystem **24** may include removable media and/or built-in devices. Memory/data-holding subsystem **24** may include optical memory devices, semiconductor memory devices, and/or magnetic memory devices, among others. Memory/data-holding subsystem **24** may include devices with one or more of the following characteristics: volatile, nonvolatile, dynamic, static, read/write, read-only, random access, sequential access, location addressable, file addressable, and content addressable. In some embodiments, logic subsystem **22** and memory/data-holding subsystem **24** may be integrated into one or more common devices, such as an application specific integrated circuit or a system on a chip.

[0051] When included, display subsystem **26** may be used to present a visual representation of data held by memory/